

United States Patent [19]

Kronenthal et al.

[11] Patent Number: 4,650,665

[45] Date of Patent: * Mar. 17, 1987

[54] CONTROLLED RELEASE OF
PHARMACOLOGICALLY ACTIVE AGENTS
FROM AN ABSORBABLE BIOLOGICALLY
COMPATIBLE PUTTY-LIKE COMPOSITION

[75] Inventors: Richard L. Kronenthal, Fair Lawn;
Frank V. Mattei, Piscataway; Alan
Levy, Bridgewater, all of N.J.

[73] Assignee: Ethicon, Inc., Somerville, N.J.

[*] Notice: The portion of the term of this patent
subsequent to Feb. 4, 2003 has been
disclaimed.

[21] Appl. No.: 791,969

[22] Filed: Oct. 28, 1985

Related U.S. Application Data

[62] Division of Ser. No. 687,692, Feb. 8, 1985, Pat. No.
4,568,536.

[51] Int. Cl.⁴ A61K 9/26

[52] U.S. Cl. 424/435; 424/484

[58] Field of Search 424/19-22

[56] References Cited

U.S. PATENT DOCUMENTS

| | | | |
|-----------|---------|---------------------|--------|
| 3,978,203 | 8/1976 | Wise | 424/22 |
| 4,130,639 | 12/1978 | Shalaby et al. | 424/78 |
| 4,186,189 | 1/1980 | Shalaby et al. | 424/78 |
| 4,439,420 | 3/1984 | Mattei et al. | 424/78 |
| 4,440,789 | 4/1984 | Mattei et al. | 424/78 |
| 4,443,430 | 4/1984 | Mattei et al. | 424/78 |

Primary Examiner—Shep K. Rose

Attorney, Agent, or Firm—Charles J. Metz

[57] ABSTRACT

An absorbable biologically compatible putty-like composition is used as a matrix from which immunologically or pharmacologically active agents, such as antibiotics, can be introduced into the body to provide a slow sustained release of the agent over an extended period of time. A preferred matrix comprises a mixture of calcium stearate, dextran and castor oil.

13 Claims, 3 Drawing Figures